ANISOTROPY MEASUREMENTS IN HIGHLY SCATTERING LIQUIDS*

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Abstract

Based on an improved theory for the scattering of light inside a turbid medium we propose an experimental inversion scheme to reconstruct the scattering coefficient ? as well as the anisotropy factor g that characterize the optical properties of the medium from a collimated light source. We demonstrate the feasibility of this method using light scattering data obtained from a Monte Carlo simulation. I will also describe our first experiments to measure the scattering coefficient of milk for various concentrations by measuring the scattered light intensity as a function of the source-detector spacing.

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[1] S. Menon, Q. Su and R. Grobe, Phys. Rev. Lett. (submitted).

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